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ABSTRACT

Structural views assume that a single, comprehensive system of thought underlies cognitive activity. Although developmental research with both children and adults has tended to assume the validity of a structural model of cognitive development, this assumption may be invalid when applied to the social cognitive judgments of adults. There are two basic concerns in examining the area of social cognition in adulthood. First, the concept of social cognition, its measurement and definition, cannot be simply conceived in a unitary fashion. Social judgments across a variety of different situations suggest patterns of heterogeneity and inconsistency across empirical studies. Secondly, social cognitive understanding represents development of the personal domain of knowledge. Knowledge in adulthood becomes increasingly domain-specific and expert. Adult competence within the logico-mathematico domain alone appears incapable of explaining the social cognitive skills of adulthood. However, domain-general descriptions of the unique qualitative dimensions of post-formal thinking by themselves are not sufficient to account for the emerging facility of adult social cognitive expertise. Social cognitive performance in adulthood is simultaneously marked by the growth of both post-formal thinking styles and expert knowledge within the personal domain. A reference list is appended. (NRB)

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Qualitative Dimensions of Social Cognition in Adulthood

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Structural views like that of Piaget assume a single, comprehensive system of thought underlies cognitive activity--thinking about people, social relationships, objects in the physical realm, etc.. Initially Piaget focused on the development of children's cognitive understanding by examing the role of social transmission in the Moral Development of the Child . After exploring the way in which social transmission transformed children's understanding to forms of adult reality, Piaget shifted to the simple, solitary judgments which children make of the non-social world (Damon, 1977). Piaget assumed that cognitive understanding of the physical world parallels developmental advances in social cognition since structural development is responsible for cognitive understanding and change. Adult cognitive development witnesses the construction of a formal operational structure which frees thought from the immediacy and concreteness of current situations and permits the use of pure, abstract and logico-deductive processes.

Developmental research with both children and adults has tended to assume the validity of a structural model either implicitly or explicitly. Research investigators search for parallelism between thinking about the social realm and the physical realm and/or examine social cognitive judgments for consistency across a wide variety of sometimes disparate situtions. Yet, there has been, until very recently, little questioning of these assumptions or the disappointing support for them. We suggest the need for a careful examination of these assumptions, especially when evaluating the social cognitive judgments of adults and elderly individuals.

Turiel (1985) has commented that developmental research on social judgment reveals a surprising heterogeneity and inconsistency in patterns of results. This suggests that neither children nor adults respond in a systematic, unitary fashion to problems within the social domain (Turiel, 1985). Thus, previous research reveals little empirical support for a consistent, coherent, and organized system (e.g., structure) responsible for social cognitive judgments (Roodin and Rybash, 1985).

Some adults may be more advanced in their thinking about people and social situations (the personal domain of knowledge) than they are about other domains like mathematics or science. Howard Gardner's (1983) theory of multiple intelligences suggests that social cognitive knowledge is one of 7 basic domains or frames (logical-mathematical, music, linguistic, spatial, bodily

kinesthetic, intra-personal, and inter-personal knowledge). There are no necessary relations among the 7 domains. An analagous view of domains of knowledge has also been espoused by Fodor (1983) and others have recognized the inherent appeal of a developmental approach to knowledge which predicts the heterogeneity in thinking across separate " systems of thinking that are organized within delimited domains " (Turiel, 1985).

It is particularly important to recognize the difference between the logico-mathematical domain and the domain of personal knowledge. Piaget's theory of cognitive development is an attempt to describe and explain the growth of the former type of knowledge. Logico-mathematical knowledge is closely aligned with scientific reasoning and has its foundation in the external activities which individuals perform on physical objects. These actions throughout development become more internalized, reversible, abstract, and integrated. Formal operational thought within the logico-mathematico domain lays the foundation for a type of " closed system " scientific thinking through which individuals develop the ability to both generate abstract hypotheses and tests them via manipulation and isolation of a crucial set of variables. The doamin of personal knowledge on the other hand (e.g., social cognitive knowledge) is seen in very different terms. Gardner (1983) conceptualized personal knowledge as the coordination of " intra-personal understanding (self-knowledge) and " inter-personal " understanding (knowledge of others). Personal knowledge has

its roots in the interactions between self and " other selves " rather than between self and physical objects. Developmentally this domain in adulthood is marked by the ability to (1) differentiate the motivations, needs, and feelings of " self " from " other " (2) coordinate one's own understanding of the differential motivations, needs, and feelings of " self " from " other, " (3) conceive of both " self " and " other " as dynamic, self-reflective systems which change and evolve over time, (4) realize that the psychological existence of " self " is tied to " other " just as " other's" existence is tied to " self, " (5) envision both " self ' and " other " as components of a social/cultural system which has the capacity to " change " both self and other as well as the tendency to be " changed by " both self and other. Some developmental theorists have attempted to describe the process by which this domain becomes articulated (cf. Broughton, 1978; Kegan, 1982; Selman, 1980) and individuals conceptualize a sense of " self," create a sense of personal identity, and come to understand the social cultural system in which they exist.

Adult thought as characterized by Piagetian descriptions of formal operations is now recognized to be incomplete and post-formal models are emerging to take its place (Commons, Richards, and Armon, 1984). Formal operations in the traditional view represents a wholistic stage of cognitive development in which individuals become capable of "closed system " scientific thinking and conceptualize knowledge in absolute/dualistic terms. A

variety of authors have found this account to over-emphasize the logico-deductive nature of thought in adult life, a form of thinking which is utilized somewhat infrequently (Labouvie-Vief, 1982). This traditional Piagetian view ignores the special qualitative character of adult thinking. Adult styles of thinking however are uniquely suited to ill-defined, open system problems which require the understanding that knowledge is both relativistic and dialectic (cf. Commons, Richards, and Armon, 1984). Arlin, 1984; Basseches, 1984,1985; Koplowitz, 1984; Kramer, 1983; Labouvie-Vief, 1984; Sinnott, 1984 have been among those who have seen the need to revise Piagetian theory in order to capture the salient character of adult styles of thought. Arlin (1975, 1977, 1984), for example, viewed post-formal thought as a mode of problem-finding which she contrasted with the problem-solving quality of formal thought. Koplowitz (1984) argued that post-formal thinking embraced the principles of non-linear causality, the compete interdependence (and non-separabilty) of variables, the open nature of boundaries and systems, and the existence of self-constructed entities and objects within a self-constructed and contextual world. In contrast, he suggested that formal thinking embraced the principles of linear causality, independence and separation of variables, the closed nature of systems and bundaries, and the existence of permanent and stable entities and objects within a permanent and stable external world. Basseches (1980, 1984; 1985) emphasized the dialectical quality of

post-formal thinking which permits adults to (1) accept contradiction as a basic facet of physical and social reality, (2) develop an appreciation of the wholistic an constitutive nature of their knowledge system, and (3) conceptualize reality, as well as their own knowledge of reality, within an open and self-evolving framework. Sinnott (1982) suggests that adults employ a set of qualitatively unique skills and operations for reconceptualizion which she calls " relativistic operations. " And, these are descriptive of adult problem-solving particularly in the social realm. The application of these " relativistic operations " appears most commonly in how we define (inclusively and exclusively) the " problem-space " (Sinnott, 1982). Kramer (1983) suggested three charcteristics of post-formal thought: (1) understanding the relativistic, non-absolute nature of knowledge (2) accepting contradiction as a basic aspect of reality (3) synthesizing and integrating contradictory alternatives into a more coherent whole rather than choosing between them.

These post-formal styles suggest that both the quality of thinking and one's personal, relativistic perspective on knowledge separate adult thought uniquely from cognition in earlier developmental periods. However, we disagree with the assumption that such post-formal styles are generally descriptive of adult thinking across all domains. The unique perspective described in post-formal styles of thinking cannot be applied globally, abstractly, and uniformly across all intellectual domains. This is the same error of

over-inclusiveness seen in Piagetian theory's reliance on the universality of formal operations and logico-deductive reasoning. Adult thinking styles emerge within particular domains. In the realm of social cognition, adult thinking skills are developed from our interactions with people. The social environment and our cognitions derived from and applied to this domain represent an inherently dynamic process which is not found in exchanges with the world of inanimate objects (cf. Broughton, 1978; Chandler, 1979; Mischel, 1974). Chandler noted that " human construction of knowledge in all of its manifestations entails an interaction of subject and object and can never consist of a purely objective discovery of impersonal physical reality (1977, p. 207). " Even children's social cognitive knowledge is " co-constructed " from their interactions with peers and adults who are at times more competent and expert (Damon, 1977).

Just as social cognitive knowledge emerges from interactions with the social realm, adult knowledge arises within particular domains. We cannot separate adult thought from the domains or objects about which we think. Thus knowledge and thought are inseparable components of adult cognition. It is not suprising to discover heterogeneity in adult thinking (i.e., uneveness across domains). This heterogeneity may arise from separate systems of thinking that are organized within domains (Turiel, 1985). Clearly the assumption that domain-specific knowledge systems exist and that adult cognition cannot be assessed apart from those

domains in which they were initially constructed requires both additional research and conceptualization.

Recent research from a cognitive science orientation suggests that the essence of cognition and/or intelligence is less a matter of generalized ability a more a matter of knowing a great deal about the world (Chi,1985; Glaser, 1984; Keil, 1981). Although no common taxonomy exists for distinguishing experts from novices, there are fundamental differences in the ways in which experts and novices represent, apply, and become introspectvely aware of knowledge systems. In highly structured domains, expertise seems to be rule-based and procedural; while in less structured domains, expertise is most likely based on a blend of different skills: rapid and efficient integration coupled with inductive processes. Highly skilled older adults, we suggest, typically continue to function as experts in domains which they have mastered despite apparent losses in component information-processing abilites. Thus far investigators have examined expertise within highly structured and narrow domains such as chess, bridge, and medical diagnosis (Charness, 1983; Chase and Simon, 1973; DeGroot, 1966; Lesgold, 1983). It is possible to extend the concept of expertise to the realm of social cognition.

Baltes and his colleagues (Baltes, Dittmann-Kohli, 1984; Dittman-Kohli and Baltes, 1985) have emphasized the growth of wisdom, personal knowledge, and practical intelligence in their conceptualizations of adult intelligence. They adopt a cognitive science perspective and

consider wisdom to be expert problem solving in a specific domain--the domain of personal knowledge. Adults are said to adopt a variety of heuristics (intuitive rules of thumb) to both define and solve real-life, ill-defined problems in living. Furthermore, Dittmann-Kohli and Baltes (1984) have considered wisdom to be " the ability to exercise good judgment about important but uncertain (ill-defined) matters of life (p.34). " Good judgments, according to Baltes and his associates, are said to be: contextual, relativistic, accepting of the ill-defined nature of "open-system" problems, directed towards the pragmatics of life (e.g., personally meaningful life goals -- both short term and long term). It is important to note that while Dittmann-Kohli and Baltes adopt a cognitive science perspective and employ expertise and a knowledge-based approach to wisdom, they have failed to recognize the under-current of post-formal styles of thinking which they assume underlies expert personal knowledge and which characterizes wisdom.

Thus to argue that social cognitive expertise in adulthood is built directly upon the personal knowledge which is acquired in childhood and adolescence is to over-emphasize the importance of knowledge per se. Expertise by itself does not capture the essential qualitative changes in the dimensions of thinking consistent with post-formal descriptions of adult thinking. To be sure, within the realm of social cognition adults are more competent and know more than children and adolescents. However, of equal importance

is the manner in which this domain-specific knowledge is understood dialectically and relativistically, and the way this knowledge is given personal meaning and relevance. In other words, expertise, domain-specificity, and qualitatively unique styles of post-formal thought, must all be assumed conceptually in order to provide an adequate account of adult social cognition.

SUMMARY

We have attempted to present two basic concerns in examining the area of social cognition in adulthood. First, the concept of social cognition, its measurement and definition, cannot be simply conceived in a unitary fashion. Social judgments across a variety of different situations suggest patterns of heterogeneity and inconsistency across empirical studies. Secondly, social cognitive understanding represents development of the personal domain of knowledge. Knowledge in adulthood becomes increasingly domain-specific and expert. Adult competence within the logico-mathematico domain alone appears incapable of explaining the social cognitive skills of adulthood. However, domain-general descriptions of the unique qualitative dimensions of post-formal thinking by themselves are not sufficient to account for the emerging facility of adult social cognitive expertise. Social cognitve performance in adulthood is simulatenously marked by the growth of both post-formal thinking styles and expert knowledge within the personal domain.

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